STATE OF WASHINGTON
DEPARTMENT OF COMMUNITY,
TRADE AND ECONOMIC DEVELOPMENT

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

September 6, 2006

The Honorable Samuel W. Bodman
Secretary of the Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

Re: State of Washington Review of Draft W of the United States Department of Energy (USDOE) Strategic Plan

Dear Mr. Secretary:

Thank you for the opportunity to comment on the Department's new Strategic Plan. The Washington State agencies, Department of Ecology and Department of Community, Trade and Economic Development, have reviewed the draft plan. Our comments on the plan are included below.

Comments from the Department of Ecology:

In our capacity as the Washington State agency responsible for overseeing all dangerous and mixed waste management activities at the Hanford Site, we found agreement with parts of your plan:

- We agree with your plan to use a geologic repository to dispose of vitrified high level waste (HLW). We encourage you to complete and open the geologic repository in support of the schedule in the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement).
- We agree with your plan to construct and operate nuclear weapons facilities in a way that protects workers, the citizens of the Pacific Northwest, and the environment. We urge you to inform the public and state and local officials of the risks associated with such facilities. We expect that you will maintain compliance with existing regulations that govern treatment, storage, and disposal of hazardous and mixed wastes that your nuclear weapons facilities generate.

- We support your efforts to develop measures to control and remediate contaminants released from your facilities.
- We support your plans to collect nuclear materials in a safe location. We encourage you to include in the plan your schedule to complete this important effort. Adding the schedule will inform the public of your commitment.

We request that you also consider the following issues:

- We urge you to continue to construct and operate the Waste Treatment Plant (WTP) to treat Hanford tank waste in a timely manner. Delays are not acceptable. The risks that leaks of tank waste pose to the groundwater and the nearby Columbia River will increase as the single-shell tanks continue to degrade and some of the double shell tanks reach the end of their design life. The high level waste must undergo treatment and the risk from uncontrolled releases from the underground storage tanks must be eliminated.
- We also urge you to continue your efforts to construct and operate a demonstration plant that will provide information about the efficacy of supplemental treatment. Without that information, your agency and ours cannot evaluate what method will be best to treat 75% of the mass that the WTP is not designed to treat.
- We urge you to continue to place a high priority on remediating contaminants in the groundwater under the Hanford Site. We urge you to devote considerable resources to eliminating the sources of contamination and to cleaning up the contaminants already present.

Cleanup of Hanford remains our goal. We endorse your commitment in the Strategic Plan to give a priority to environmental cleanup. A table with more detailed comments on the waste management portion of the plan is enclosed.

Comments from the Department of Community, Trade and Economic Development:

- Goal 1.2 – Environmental Impacts of Energy: Improve the quality of the environment by reducing greenhouse gas emissions and environmental impacts to land, water, and air from energy production and use.

  We support this and look forward to working with the USDOE to implement it. We would like to see the strategy - Work collaboratively with other Federal agencies, private industry and other countries to accelerate the adoption of technologies capable of substantially reducing global emissions of greenhouse gases and other emissions – include states and universities in the list of collaborators. They have partnered with the USDOE to work toward this goal for many years.

- Strategic Theme #3: Strengthening U.S. scientific discovery, economic competitiveness and improving quality of life through innovations in science and technology.

  We support this theme and it goals. We would like to see this expanded to include strategies that support economic competitiveness through the economic development of businesses which promote and develop new ways to become more energy efficient and increase use of renewable energy.

  We strongly support the recommendation to provide mentored experiences for K-12 teachers at National Laboratories to transform teachers of science into "teacher scientists". Our teachers are some of the best in the country, and we are home to the Pacific Northwest National Laboratory. Giving our K-12 teachers opportunities to support and improve their teaching capabilities can be a key method to help educate our nation's next generation of scientists and engineers.

If you wish to discuss Washington's issues, please contact Jane Hedges at 509-372-7905 or Tony Usibelli at 360-956-2125.

Sincerely yours,

Tony Usibelli

Tony Usibelli, Assistant Director
Energy Policy
Washington State Department of Community, Trade and Economic Development

Jane A. Hedges, Manager
Nuclear Waste Program
Washington State Department of Ecology

Enclosure

cc w/enc: Keith Klein, USDOE-RL
Roy Schepens, USDOE-ORP
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Todd Martin, HAB
Ken Niles, ODOE

Detailed Comments from the Washington State Department of Ecology on the Department of Energy Strategic Plan, Draft W

USDOE Draft Strategic Plan Section	USDOE Draft Strategic Plan Text	Washington Department Of Ecology Nuclear Waste Program Comments
Goal 1.2, Environmental Impacts of Energy, Description, ¶ 2, bullet 1	**Strategies to reach this goal include** • … complete a permanent repository for nuclear waste at Yucca Mountain by 2017; …	The State of Washington supports the USDOE's plans to use a geologic repository to dispose of vitrified high level waste. The Washington Department of Ecology is responsible regulating the USDOE's treatment and storage of 53 million of high level liquid tank waste now stored in underground tanks on the Hanford Site. Under the terms of the *Hanford Federal Facility Agreement and Consent Order* (called the Tri-Party Agreement or TPA) that the USDOE, Ecology, and the US Environmental Protection Agency (USEPA) signed, the USDOE must complete hot commissioning of the Waste Treatment Plant by January 31, 2011, and treat all of the Hanford HLW using vitrification by February 28, 2018. Ecology supports the completion of tank waste treatment to meet the TPA and encourages the USDOE to complete and open the geologic repository in support of the TPA schedule.
Goal 2.1, Nuclear Deterrent, Description, ¶ 3, bullet 5	**Strategies to reach this goal include** • Design, construct, and operate nuclear weapons facilities in a manner that protects public health and safety, worker safety, and the environment	Ecology agrees with the philosophy that the USDOE expressed in the bullet. The State of Washington is now regulating the cleanup of the Hanford Site, where past disposal practices have contaminated more than 18 square miles of groundwater, leaked more than one million gallons of HLW into the soil, and created more than 1,700 waste sites and more than 500 contaminated facilities. The risk that arises from the operation of nuclear weapons facilities should give the USDOE the incentive to inform the public and local and State officials of the wastes that will result and the USDOE's plans to manage them. The USDOE must achieve compliance with existing laws that govern treatment, storage, and disposal of hazardous wastes and mixed wastes that nuclear weapons facilities generate to avoid the long-term and cumulative adverse impacts that have resulted from past operations at sites such as Hanford in Washington State.
Goal 3.1 Scientific Breakthroughs, Description, ¶ 1, bullet 2	Expand efforts in biological and environmental research, including genomic and related biological sciences, creating fundamentally new energy sources and conversion processes, improved climate and earth system modeling, and understanding prediction and control of environmental fate and transport	Ecology supports development of measures to control and remediate contaminants in the environment. Ecology recognizes the USDOE's effort to halt the movement of strontium into the Columbia River through injection of an environmentally benign substance that eliminates the mobility of the chemical. Ecology also supports use of systems that treat groundwater to remove contaminants and development and use of leak detection systems for retrieval of wastes from underground waste storage tanks holding 53 million gallons of waste at Hanford. Ecology encourages the USDOE to provide direct, dedicated funding to its Environmental Management organization for use in developing and adapting technology for cleanup.

Detailed Comments from the Washington State Department of Ecology on the Department of Energy Strategic Plan, Draft W

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Goal 3.3 Research Integration, Description, ¶ 1, bullet 1	Strengthen the ties between the basic research and applied mission programs in Department planning through integrated research management and initiatives	Until the USDOE established its accelerated mission reform budget and re-defined the responsibilities of the Science function, funds were available to Environmental Management to use for technology development. When the EM function lost funding for science and technology projects, the result was a delay in exploring and adapting technology to aid in cleanup. Ecology applauds the restoration of the funds for strontium cleanup and encourages the USDOE to augment the funding for strontium removal in the 100-N Area in future years.
Goal 4.1 Environmental Cleanup, Description, ¶ 3	DOE will maintain a focus on site completions, with an additional ten sites or areas projected to be completed by 2009.	Ecology supports the USDOE's efforts to cleanup its small sites; however, Ecology does not support the USDOE's plan to use Hanford as a regional disposal center that will receive wastes from those cleanup efforts. Ecology does not support disposal of wastes that can further degrade the resources of the State (e.g., the groundwater beneath the Hanford Site and the adjacent Columbia River) if they escape into the environment. As the State of Washington has told the USDOE in other forums (e.g., the West Valley Demonstration Project Waste Management Environmental Impact Statement [EIS] and the Modern Pit Facility EIS), the operating life of Hanford disposal facilities should not lengthen to receive wastes from other cleanup efforts. The Hanford Site cleanup effort should be the focus of the USDOE's effort, not the extension of the disposal mission for storage or disposal of waste from other cleanup sites. The risk to the environment and public health from past releases from waste tanks, the improper disposal of radioactive and chemical wastes to the soil column, the presence of contaminated water and sludge in basins next to the Columbia River, and numerous abandoned contaminated facilities must be remedied. The State of Washington considers the health and safety of its citizens and the protection of its resources (including its River fisheries and its agriculture) to be paramount. The Hanford cleanup must receive full finding to meet the milestones established in the Tri-Party Agreement, and given higher priority than receipt of waste from other sites within the USDOE complex.

Detailed Comments from the Washington State Department of Ecology on the Department of Energy Strategic Plan, Draft W

USDOE Draft Strategic Plan Section	USDOE Draft Strategic Plan Text	Washington Department Of Ecology Nuclear Waste Program Comments
Goal 4.1 Environmental Cleanup, Description, ¶ 4, bullet 1	In addition to its emphasis on site cleanup and closures, the Department is also focusing on longer-term activities required for the completion of the cleanup program. These include: • Constructing and operating facilities to treat radioactive liquid tank waste into a safe stable form to enable ultimate disposition	This statement appears to be at variance with the USDOE's plan to delay the commissioning and operation of the Hanford WTP from 2011. While the actual date for operation varies from 2017 to 2019, the greater issue remains that 177 underground storage tanks continue to store waste, many far beyond their design life. The USDOE has already identified at least 67 of the tanks as known or suspected of leaking. Tank waste has already traveled through the soil and reached the groundwater more than 200 feet below the ground surface. The waste already in the groundwater provides a risk to the Columbia River fisheries, the drinking water supplies of communities along the River, and to agriculture. Release of greater volumes of tank waste that will increase contamination in the groundwater that could result from delays is unacceptable. In addition, the USDOE has missed the TPA milestones that require it to evaluate and recommend the best method to treat the 90% (by mass) and 75% (by activity) of Hanford's tank waste that the WTP will not treat. The USDOE chose not to fund construction of a demonstration facility that would have provided data on the efficacy of one treatment process in FY 2007. That decision does not appear to match the USDOE's focus for the longer term. The strategic plan draft would appear to assume that delays in tank waste treatment have no impacts. Such a position ignores the increasing threat to the environment and public health that the potential for more leaks from the Hanford tanks poses. The State of Washington expects the USDOE to focus on tank waste retrieval and treatment in the near-term, not in the undefined "longer term" in the draft strategic plan.
Goal 4.1 Environmental Cleanup, Description, ¶ 4, bullet 2	Securing and storing nuclear material in a stable, safe configuration in secure locations to protect national security	As Ecology has stated previously, the agency understands the need to protect nuclear material. Ecology supports the collection of nuclear material at a safe secure site that continues a national defense mission, such as the Savannah River Site. Ecology does not support the use of cleanup funds to ensure the safety and security of onsite storage. Ecology is encouraged to hear that the RL Office is now planning to ship the nuclear materials offsite by 2009. Ecology suggests that the bullet clearly state that sites storing the materials ship them to central collection areas by 2009 or a date that the USDOE has established for consolidation. Clarifying the USDOE's plan will provide the public assurance that the USDOE is considering both national security and protection of the environment and public health at its sites.

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Goal 4.1, ¶ 4	**Strategies to reach this goal include** • Identify and eliminate the most serious risks to worker safety, human health, and the environment	Ecology recognizes that the USDOE has eliminated several serious risks posed by storage of degraded spent reactor fuel in aging water filled basins, inadequate control of plutonium in highly contaminated facilities, disposal of waste in burial grounds next to the Columbia River in an industrial area only three miles north of the City of Richland, and release of carbon tetrachloride to the soil. To eliminate the **greatest** threat to worker safety, human health, and the environment, the USDOE must retrieve the liquid wastes from the single shell tanks; treat the waste to meet land disposal standards for disposal of mixed waste, and dispose of the high level radioactive waste in a geologic repository. Ecology does not support any strategy that attempts to reconsider the risk that the tank wastes pose at Hanford with the intent to delay or avoid treatment of the waste. The risk to groundwater from unmitigated or unremediated leaks and that from contaminated groundwater must continue to have high priority. Past releases have already contaminated the groundwater, making its remediation a pressing priority. Ecology does not support any attempts to identify risk from contaminated groundwater as anything other than serious. Assigning the groundwater resource as an irreversible, irretrievable loss in the Hanford Solid Waste EIS does not in any way relieve the USDOE of its responsibility to avoid further degradation or to remediate the contamination through source reduction and active treatment. Ecology suggests that elimination of the most serious risks is a suitable strategy at Hanford, rather than prolonged efforts to identify risks that delay elimination.
	Strategies to reach this goal include • Leverage science and technology to directly address the specific, applied needs for cleanup and closure	Please see the comment that addresses the use of science and technology Ecology provided for Goal 3.3 above.

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Goal 4.2 Managing the Legacy, Description ¶ 4	**Strategies to reach this goal include** • Optimally re-use lands, ensuring that human health and the environment are protected and that regulators and the community are involved	Ecology does not oppose the re-use of lands on the Hanford Site. Ecology *is* concerned that the USDOE is perhaps optimistic in its view that it can protect human health and the environment when it releases control of the Site. From that perspective, Ecology continues to press for more cleanup of the Site, rather than use of a strategy that presumes some form of physical barrier will provide adequate protection. Mixed wastes can continue to pose threats to human health and the environment for thousands of years. Many of those wastes can be removed and/or treated to reduce the risks. Leaving wastes in place should only be considered when the USDOE is sure that the concentrations and forms of the waste are such that they pose very little risk to humans and the environment. While the volume of contaminated soil, water, groundwater at Hanford is very large, should the USDOE consider re-use, Ecology would require cleanup, rather than installation of engineered barriers and abandonment.
Crosscutting Science Integration	Our understanding of subsurface biogeochemistry and contaminant transport in groundwater limits our ability to predict or control contaminant movement in the subsurface. …Resolving subsurface groundwater contamination issues requires an integrative scientific approach with teams or researchers working in the laboratory and in the field across scales to decipher and predict the mechanisms controlling contaminant mobility in the environment. While these are not exhaustive lists, they represent an initial and ambitious set that offer high potential payoff, this challenging the science and technology communities to work together in the years ahead.	Ecology supports the USDOE's recognition of its limitations in understanding interactions in the subsurface and groundwater. Ecology also supports research into bioremediation and contaminant fate and transport. Such research may lead to the development of new, more efficient methods of treating contaminated groundwater and environmental media. Ecology supports the USDOE's use of science funds or dedicated funds within the EM function for such efforts. Ecology also supports a strategy that uses existing technology to clean up the groundwater and subsurface soils when the USDOE can achieve success using it. Ecology and the State wish the groundwater under the Hanford Site to undergo treatment per the strategy established in the integrated groundwater management plan. Clean up of the soils and disposal of treated, stabilized soils in a compliant, protective facility is the agency's goal. Ecology also supports removal of any source term that contaminates the groundwater when that removal action can be effective. Ecology maintains a "bias for action" at Hanford to clean up the waste. Using technology in development to clean up waste sites supports that bias and drives cleanup. Delay to develop new technology must be balanced against the risk of leaving waste in place.